

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An in-wheel motor system comprising:

~~in which an in-wheel motor, installed in a wheel portion, and for driving a wheel, the in-wheel motor being~~ is mounted to an unsprung portion of a vehicle by a damping member or a damping unit,

wherein, the motor is mounted to the unsprung portion of the vehicle by a damping member comprising a plurality of shock absorbers, each having a spring element and a damper element connected to the spring element in parallel or a damping member comprising either one or more of at least one damper with a spring element, each comprising a spring element and a damper element connected to the spring element in series and at least one composite connection damper whose spring element and damper element connected in parallel are connected to a spring element in series.

2. (original): The in-wheel motor system according to claim 1, wherein the motor is a hollow motor.

3. (previously presented): The in-wheel motor system according to claim 1, wherein the motor is supported to the unsprung portion of the vehicle in the vertical direction by spring

elements and dampers with a spring element, each comprising a spring element and a damper element connected to the spring element in series.

4. (original): The in-wheel motor system according to claim 3, wherein the stator side of the motor is supported to a knuckle by first spring elements in the vertical direction, and the stator side and the unsprung portion of the vehicle are interconnected by dampers with a spring element, each comprising a spring element and a damper element connected to the spring element in series and arranged parallel to the first spring elements.

5. (previously presented): The in-wheel motor system according to claim 3 , wherein the motor is supported by springs and dampers with a spring element in the horizontal direction in addition to the vertical direction.

6. (previously presented): The in-wheel motor system according to claim 1 , wherein the motor is supported to the unsprung portion in the vertical direction by first spring elements, a first damper element and a damper with a spring element, comprising a second spring element and a second damper element connected to the second spring element in series.

7. (original): The in-wheel motor system according to claim 6, wherein the stator side of the motor is supported to the knuckle by the first spring elements and the first damper element arranged parallel to each other in the vertical direction, and the stator side and the unsprung

portion are interconnected by a damper with a spring element, comprising a second spring element and a second damper element connected to the second spring element in series and arranged parallel to the first spring elements and the first damper element.

8. (previously presented): The in-wheel motor system according to claim 7, wherein the motor is supported by springs, dampers and dampers with a spring element in the horizontal direction in addition to the vertical direction.

9. (currently amended): The in-wheel motor system according to claim 1, wherein ~~the cylinder body of~~ in the damper with a spring element, a cylinder body is connected in series between the damper element and the spring element ~~constituting the damper with a spring element~~.

10. (previously presented): The in-wheel motor system according to claim 1, wherein the spring element constituting the damper with a spring element is a metal spring, air spring or rubber spring.

11. (currently amended): The in-wheel motor system according to claim 1, wherein the spring element constituting the damper with a spring element, is mounted on both sides ~~in the axial direction of the~~ a piston of the damper with a spring element in an axial direction thereof.

12. (currently amended): The in-wheel motor system according to claim 1 , wherein the motor is supported to the unsprung portion of the vehicle in ~~the~~a vertical direction by a composite connection damper whose spring element and damper element connected in parallel are connected to a spring element in series.

13. (original): The in-wheel motor system according to claim 12, wherein the motor is supported to the unsprung portion of the vehicle in the vertical direction by the composite connection damper and a damper element arranged parallel to the composite connection damper.

14. (original): The in-wheel motor system according to claim 12, wherein the composite connection damper is used as a first composite connection damper, a composite connection damper whose spring element and damper element connected in parallel are connected to a damper element in series is used as a second composite connection damper, and the motor is supported to the unsprung portion of the vehicle in the vertical direction by the first composite connection damper and the second composite connection damper.

15. (original): The in-wheel motor system according to claim 14, wherein the cylinder body of the damper element arranged parallel to the spring element is interposed between a damper element connected to the damper element and spring element of the second composite connection damper in series and the spring element.

16. (currently amended): The in-wheel motor system according to claim 12, wherein ~~the a~~ cylinder body of the damper element is situated at ~~the other an~~ end of the spring element arranged parallel to the damper element of the composite connection damper.

17. (previously presented): The in-wheel motor system according to claim 12, wherein the spring element constituting the composite connection damper is a metal spring, air spring or rubber spring.

18. (currently amended): The in-wheel motor system according to claim 12, wherein the motor is supported to the unsprung portion of the vehicle by a damper and the composite connection damper, or by a plurality of the composite connection dampers in ~~the a~~ horizontal direction in addition to the vertical direction.

19. (previously presented): The in-wheel motor system according to claim 1 , wherein the plurality of shock absorbers include at least two shock absorbers which differ from each other in one or both of direction and damping factor.

20. (currently amended): The in-wheel motor system according to claim 19, wherein ~~the a~~ movable end of at least one of the shock absorbers is connected to the motor side and ~~the a~~ fixed end thereof is connected to the unsprung side of the vehicle, and the a movable end of at

least one of the other shock absorbers is connected to the unsprung side of the vehicle and ~~the a~~
fixed end thereof is connected to the motor side.

21. (original): The in-wheel motor system according to claim 20, wherein the shock
~~absorber absorbers are~~ is composed of a hydraulic unit having a spring, piston and hydraulic
cylinder.

22. (currently amended): The in-wheel motor system according to claim 21, wherein
~~the a~~ piston upper chamber and ~~a~~ piston lower chamber of the hydraulic cylinder of ~~a the~~ shock
absorber whose movable end is connected to the motor side, are connected to ~~the a~~ piston upper
chamber and ~~a~~ piston lower chamber of the hydraulic cylinder of ~~a the other~~ shock absorber
whose movable end is connected to the unsprung side by working oil flow passages having an
independent valve, respectively.

23. (currently amended): ~~An in-wheel motor system comprising~~ The in-wheel motor
system according to claim 1,

~~an in-wheel motor for driving a wheel, which is installed in a wheel portion and mounted~~
~~to an unsprung portion of a vehicle by a damping member or damping unit,~~

wherein a motor rotor and a wheel are interconnected by a plurality of cross guides which
are arranged in ~~the a~~ circumferential direction of the rotor at equal intervals and whose moving
directions cross each other on the front and rear sides.

24. (currently amended): The in-wheel motor system according to claim 23, wherein the cross guides are arranged such that ~~the~~ moving directions of all ~~the~~ motor side guide rails of the cross guides become 45° from ~~the~~ a radial direction of the motor rotor and ~~the~~ moving directions of all ~~the~~ wheel side guide rails become perpendicular to the moving directions of the motor side guide rails.

25. (currently amended): The in-wheel motor system according to claim 24, wherein one or more elastic annular dust boots are installed between the motor and the wheel to block a space formed between the motor and the wheel from ~~the~~ outside.

26. (currently amended): The in-wheel motor system according to claim 25, wherein ~~the~~ a rotating side case of the motor and the wheel are interconnected by a flexible coupling, and one of the annular dust ~~boot~~ boots is mounted between ~~the~~ an end portion on a side opposite to the flexible coupling mounting side of the rotating side case of the motor and ~~the~~ an end opposite to ~~the~~ the above end of the wheel thereof.

27. (currently amended): The in-wheel motor system according to claim ~~24~~ 26, wherein ~~an~~ one of the annular dust ~~boot~~ boots is provided to block ~~the~~ a coupling portion of the flexible coupling from the outside.

28. (currently amended): The in-wheel motor system according to claim ~~24~~27, wherein the annular dust boot has a wavy sectional form in a direction perpendicular to the ~~axis~~an axial direction.

29. (currently amended): The in-wheel motor system according to claim 25, wherein a plurality of holes are formed in ~~the~~a vicinity of ~~the~~a wheel side mounting portion of the one or more annular dust ~~boot~~boots.

30. (currently amended): The in-wheel motor system according to claim 24, wherein a hollow disk-like partition₁ which can move in ~~the~~an axial direction of the motor₁ is provided on ~~the~~an exterior side of a motor bearing for connecting ~~the~~a rotating side case and ~~the~~a non-rotating side case of the motor.

31. (original): The in-wheel motor system according to claim 30, wherein a hollow portion is formed in bearing fixing covers mounted to the exterior side of the motor bearing and the hollow disk-like partition is stored in the hollow portion.

32. (currently amended): The in-wheel motor system according to claim 31, wherein ~~the~~a space in ~~the~~a radial direction between the hollow disk-like partition and the bearing fixing cover₁ on the rotation side case is made larger than ~~the~~a space in the radial direction between the hollow disk-like partition and the bearing fixing cover on the non-rotation side case.